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ABSTRACT

Attendees at the 1998 Texas Counseling Association's annual convention were given a brief survey and short test on psychopharmacology. Analysis was performed to examine the effects of demographic and ideological variables. The model moderately explained the variance on the psychopharmacology test with only 2.5% of the adjusted variance explained by the demographic and ideology variables. Even those who had taken courses in psychopharmacology failed to score significantly higher than their peers. A strong relationship was determined between the demographic and ideological variables and the perceived need for additional training in psychopharmacology. Practitioners with more clinical experience and more coursework in pharmacology believed more medical courses should be required in their respective disciplines. (Contains 37 references.) (Author/JDM)

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Running head: PERCEPTIONS OF PHARMACOTHERAPY

Psychotherapists' Perceptions and Understanding of Pharmacotherapy

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(108th, Washington DC, August 4-8, 2000).

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Abstract

Attendees at the 1998 Texas Counseling Association's annual convention in Amarillo, Texas (N = 301) were given a brief survey and a short test on psychopharmacology. Two simultaneous, multiple-regression analyses were performed to examine the effects of demographic and ideological variables. The model moderately explained the variance on the psychopharmacology test with only 2.5 percent of the adjusted variance explained by the demographic and ideology variables. Even those who had taken courses in psychopharmacology failed to score significantly higher than their peers. The second multiple regression analysis, revealed a strong relationship between the demographic/ideological variables and the perceived need for additional training in psychopharmacology. Practitioners with more clinical experience and prior coursework in pharmacology believed more medical courses should be required in their respective disciplines.

Psychotherapists' perceptions and understanding of pharmacotherapy

Pharmacological interventions have become a way of life in the mental health industry. Brands like Eli Lilly's Prozac have become household names and most psychotherapists will now have clients receiving some form of drug-related therapy. While all mental health specialties experience the impact of drug therapy in their clinical populations, psychologists were the first of the non-medical professionals to apply a scientific mind-set in examining the possibilities of combining psychotherapy with pharmacotherapy (Wiggins& Cummings, 1998). Other psychotherapy fields such as professional counselors, marriage and family therapists, and social workers are only now beginning to explore the implications of drug therapy for their professions.

While many psychologists are pushing for the three-hundred hour post-doctoral training in psychopharmacology in order to gain prescription privileges (Seppa, 1996), other non-medical mental health professions still offer training programs with no pharmacological training whatsoever (Evans, 1996). Between no training on the one hand, and prescription-level training on the other, there is clearly a movement to increase the pharmacological training among practicing psychologists.

With such ambivalence observed within mental health instruction, it is not surprising to find masters level practitioners in an even greater quandary

regarding how much pharmacologic knowledge should be acquired. Recently, attention has focused on the care of children and the need for all mental health practitioners to have a basic understanding of psychiatric treatments. Shortcomings in training and experience complicate the jobs of school counselors when they must play the rolls of both counselor and psychotropic monitor or prescriber (Kubiszyn, 1994). James and Nims (1996) argue that a basic knowledge of drug side effects makes it possible for school counselors to report any drug-related problem to a child's parents or physician, an important consideration when 2.8% of American school-age children have been taking Ritalin for attention and hyperactivity disorders. Given the amount of time children spend in schools, Knitzer, Steinberg, and Fleisch (1991) advanced the notion that schools, in and of themselves, are a form of psychological intervention, and, as such, the people working there should have an understanding of child and adolescent psychopharmacology.

As children and adolescents begin to benefit from psychotropic medications, the whole family system is altered, which suggests that marriage and family therapists might also benefit from psychopharmacology training. According to Patterson and Magulac (1994), most marriage and family training programs do not include psychopharmacology in their curricula. This creates a gap in awareness which could be addressed by learning the drugs' effects on the individual and thus their impact on the family dynamic. Patterson and Magulac

(1994) reported that the field of marriage and family therapy, while deeply committed to the systems concept, has begun to recognize the necessity of a basic understanding of pharmacology.

Dziegielewski (1998) urged social workers and other health care professionals to be aware of what the limitations and strengths of psychotropic drugs. Most psychiatric medicines do not cure behavioral disorders, which requires clinicians understand and address clients' emotional concerns. Social workers, frequently the primary interface with the family in hospital settings, are called upon to explain side effects or protocols of drug interventions, and they work within a medical community where the language of pharmacology is spoken. Dziegielewski (1998) stated that many social work professionals and educators believe that medication training needs to be incorporated into the curriculum at both the graduate and undergraduate levels.

Both clients and their insurance companies want and expect a medication that will help relieve symptomology (Dziegielewski, 1998). Clients asking for medicinal intervention have over 4,000 drugs available today (Physicians' Desk Reference (PDR), 1997), and among the psychologists responding to the APA's survey (Williams & Kohout, 1999), 43% of their clients have received a psychotropic medication as part of their treatment. Throughout the 1990s, managed care looked at drug companies' outcome measures for their psychotropic drugs. With drug research in hand, managed health care has succeeded in limiting

both the number of sessions and the financial reimbursement for talk therapy, so that clinicians can no longer wait to try medication for their clients if psychotherapy is not effective (Patterson and Magulac, 1994).

These pressures from insurance providers have forced social workers, counselors, family therapists and psychologists to consult and rely on psychiatrists and physicians for their prescribing privileges, even though they each operate from fundamentally different models (Wiggins, 1998). Of these professionals, PhD. psychologists compete most closely with psychiatrists, a fact that Broskowski (1995) predicted would mean that the continued survivability of psychology as a clinical specialty depends on the ability of psychologists to integrate themselves into health care delivery systems. Fitting into today's health care delivery systems means knowing about, and believing in, psychopharmacology. Even within the psychiatric profession itself, those who speak out against the primacy of biological and psychopharmacological intervention risk their economic survival.

The debate now raging is not about the necessity of integrating drug therapies into the mental health field, but rather just how much non-medical mental health practitioners of all types must know in order to survive and to provide what the clients want and need. Sammons, Sexton and Meredith (1996) observed that psychologists must survive in the mental health field by having

prescription privileges. They must, therefore, obtain knowledge and skills far beyond the current graduate-level curricula.

If professional mental health providers express little interest in spending more time and money on learning more about medical interventions, persuading academic institutions to provide such coursework would be difficult. Prior to this study, however, practitioners in counseling, social work, school counseling, marriage and family therapy, and psychology have not been polled about their opinions. Do non-medical mental health practitioners believe psychopharmacology training would be useful? Do they currently possess an adequate knowledge on the subject?

Method

Participants:

Attendees at the 1998 Texas Counseling Association annual convention in Amarillo, Texas were selected at random to participate in the study. The 301 participants ranged in job experience from 0 to 40 years, averaging 11.3 years of postgraduate experience. Most (78%) had earned masters degrees with only 18% having earned doctorates. The vast majority (74%) were female and had no formal coursework in psychopharmacology. There were also significant differences by area of discipline. Most (N=187) were school counselors. The remaining participants were professional counselors (N=73), psychologists

(N=13), marriage and family therapists (N=4), social workers (N=4), or other disciplines (N=20).

Instrument:

A brief survey was created to explore participants' demographic background, views on psychopharmacology, and medical knowledge. The instrument included a series of 5-point Likert-type items that rated participants' perceived value of psychopharmacology.

A second instrument, a brief, eight-item, multiple-choice psychopharmacology quiz, was also constructed for this study. The quiz included commonly known information about mental health medications. A panel of expert pharmacists helped to establish content validity. The 4-member panel had an average of 18 years of pharmaceutical experience and had a high inter-rater reliability (intraclass correlation coefficient of .92). The questions for this test were as follows:

1. What class of medications should you avoid giving to suicidal clients:
   a) Substance P
   b) Tricyclic Medications (TCA)
   c) Anti-inflammatory agents
   d) Serotonin reuptake inhibitor (SSRIs)
2. Which of the following medication classes are ***not*** considered antidepressants:
   a) Heterocyclic Medications
   b) Serotonin reuptake inhibitor
   c) Beta-Adrenergic Blocking Drugs
   d) Monoamine oxidase inhibitors
3. If a person was having problems sleeping, which medication might assist their sleep onset:

a) fluoxetine (Prozac)
b) triazolam (Halcion)
c) alprazolam (Xanax)
d) trazodone (Desyrel)

4. Lithium is effective with which of the following:
   a) Schizoaffective
   b) Aggression
   c) Bipolar
   d) All of the above
5. The most serious problem with conventional antipsychotic medication is:
   a) Extrapyramidal symptoms (including dystonias, parkinsonism, and akathisia)
   b) High blood pressure (as indicated by severe headaches, nausea and vomiting)
   c) Depression
   d) Anticholinergic symptoms (including dry mouth, blurred vision, urinary hesitancy, or constipation.)
6. Of the following, which is the most effective drug for AD/HD (with or without hyperactivity)?
   a) Fluvoxamine (Luvox)
   b) Imipramine (Tofranil)
   c) methylphenidate (Ritalin)
   d) Nortriplyline (Aventyl)
7. What class of drugs are commonly used to treat anxiety:
   a) Benzodiazepines
   b) Neuroleptics
   c) Stimulants
   d) Tricyclic Medications
8. Which of the following medications would be given to someone suffering from depression (unipolar):
   a) temazepam (Restoril)
   b) nefazadone (Serzone)
   c) alprazolam (Xanax)
   d) lorazepam (Ativan)

Answers: 1) b, 2) c, 3) d, 4) d, 5) a, 6) c, 7) a, 8) b

Procedure:

Eight graduate students from West Texas A&M University helped in administering the survey. Participants were randomly selected and asked about

the number of years they have been practicing, their area of study, setting of their practice, highest degree completed, gender, and the number of courses taken in psychopharmacology.

After completing the survey, participants took a brief psychopharmacology quiz. The quiz included commonly known information about psychotropic drugs, such as the drug used for AD/HD treatment, usage of a specific SSRI drug, use of Lithium, the class of drugs used to treat anxiety, dangers of using TCA medications, and the side-effects associated with conventional antipsychotic medications.

Data was analyzed using two simultaneous, multiple-regression analyses to examine the effects of demographic and ideological variables on (a) the number of correct answers the participants scored on the test and (b) the number of courses they believed should be required in their respective graduate programs.

Results

Two simultaneous, multiple-regression analyses were performed to examine the effects of demographic and ideological variables on (a) the number of correct answers the participants scored on the test and (b) the number of courses they believe should be required in their respective graduate programs. In the former regression analysis, the model only moderately explained the variance on the psychopharmacology test ($\Delta R^2 = .025$, $F(8,291) = 2.01$, $p < .047$), which means only 2.5 percent of the adjusted variance was explained by the

demographic and ideology variables. As Table 1 depicts, only the participant's self-identified knowledge of psychopharmacology (β = .191, p = .003) predicted how well the participants would score on their test. Years of experience (β = -.123, p = .057), though not significant, may be negatively associated with psychopharmacology knowledge.

---------- Insert Table 1 about here ----------

Though the variables poorly predicted the participants' knowledge of psychopharmacology, the second multiple regression analysis revealed a strong relationship between the demographic/ideological variables and the need for additional training in psychopharmacology. Overall, the model explained over 24% of the variance (R^2= .24, F(10,289)=10.576, p<.001), but it contained a few surprises. As depicted in Table 2, participants with more experience tended to believe more classes should be required (t(291) = 3.564, p < .001). It appears that the longer practitioners worked in their field, the more importance they placed on pharmacological knowledge.

Training appears to have a mixed effect. Participants with more academic training (e.g., Ph.D. over M.A.) believed fewer courses should be offered (t(291)= -2.243, p < .025). However, participants who had taken more psychopharmacology courses believed more should be required (t(291) = 3.205, p

< .001) as did those who expressed a desire in taking a psychopharmacology course ($t(291)= 7.821$, $p < .001$).

---------- Insert Table 2 about here ----------

Despite the mixed findings regarding the demographic variables, the need for pharmacological training was very apparent. Over 92% of the respondents believed at least one course should be required in their respective fields, and over 40% of those surveyed believed that two or more courses should be offered.

A casewise correlation analysis revealed that the more psychopharmacology courses participants had taken, the higher they ranked their medical knowledge ($r = .47$). The number of courses taken also was associated with the belief that more psychopharmacology coursework should be required in their respective disciplines ($r = .26$). However, as found in the multiple regression analysis, their coursework had no direct effect on their actual knowledge ($\beta = -.124$, $p < .065$). The type of graduate training the individual's received also failed to predict psychopharmacology knowledge ($F(5,294)= 1.92$; $p < .0915$).

Discussion

Practitioners from counseling, marriage and family, school counseling, and psychology placed a high value on psychopharmacologic knowledge. With

over 93% of the practitioners believing that at least one course should be required in their discipline, and over 12% believing that three or more should be required, practitioners are providing a clear message: a general knowledge of medications is essential to their work. This should come as no surprise, but considering the paucity of courses offered in pharmacology, even within psychology programs, it should serve as a warning to universities and other training programs.

The rationality for increasing pharmacological knowledge probably stems from the influence these medications are having on mental health clients. As Freimuth (1996) notes, a variety of mental health components require a functional medical knowledge; for example, (a) when to recommend a psychiatric evaluation, (b) methods of introducing medication to a patient, (c) techniques for building effective multidisciplinary teams, or (d) interactions between medication use with psychotherapy. In addition to these general components, specialized disciplines require an increased level of knowledge. For example those involved in geriatrics should be aware of older adults' heightened susceptibility to adverse drug effects (Smyer & Downs, 1995). The varied settings in which such knowledge is needed may also explain why practitioners with more experience tended to believe more classes should be required.

It is equally important to note that while practitioners currently believe some medical knowledge is important, they lack this knowledge. None of the practitioners queried received a perfect score on the test, and no mental health

discipline averaged over 50% on the exam. Psychologists, professional counselors, marriage and family therapists, school counselors and social workers all scored below expectation. Even those who had taken courses in psychopharmacology failed to score significantly higher than their peers. Though direct knowledge may not have been increased, clinicians who took courses in psychopharmacology were more likely to realize they needed further training.

With no significant association between the number of courses taken and psychopharmacological knowledge, it is not surprising that participants with more academic training (e.g., Ph.D. over MA) believed fewer courses should be offered. Perhaps the added training helps them to understand the limitations of medical training or maybe they become more aware of the alternatives. Regardless of the reason for this finding, it is important to note that psychology-trained practitioners, who were also the most likely group to hold a doctoral degree (65%), scored near the bottom on psychopharmacologic knowledge. This is disconcerting for a number of reasons. The most significant of which is that psychologists are presently the only group lobbying for prescription privileges.

It should be noted, however, that only 13 psychologists participated in the study and they were attending a conference for counselors. Their interest in psychopharmacology may have been significantly less than that of other clinicians in their discipline. If future studies obtain similar findings, then universities are recommended to follow Fox, Schwelitz, and Barclay's (1992) advice and require

graduate program applicants to demonstrate a strong undergraduate knowledge base in physiology and medicine.

In addition to the small sample size for certain disciplines, most of the examinees were from the state of Texas, which may not represent the larger practitioner population. Still, the findings from this study represent an important first step in the understanding of practitioners' psychopharmacologic knowledge and their belief that additional training is necessary.

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Table 1

Multiple Regression Analysis for the Number of Correct Answers on the Psychopharmacology Test

	β	Standard Error of β	t(291)	p-level
Years of experience	-.123	.064	-1.908	.057
Academic degree	.062	.063	.987	.324
Gender (female=1, male=2)	-.017	.064	-.270	.787
Courses in psychopharmacology	-.124	.067	-1.845	.065
Self-identified psychopharmacology knowledge	.191	.065	2.914	.003
Value placed on psychopharmacology knowledge	.032	.060	.532	.594
Desire to take a psychopharmacology course	.045	.065	.693	.488
Number of psychopharmacology courses that should be required	-.054	.065	-.833	.405

Table 2

Multiple Regression Analysis for Demographic and Ideological Variables on the Number of Psychopharmacology Courses Participants' Believe Should Be Required

	β	Standard Error of β	t(291)	p-level
Years of experience	.207	.058	3.564	.000
Academic degree	-.124	.055	-2.243	.025
Gender (female=1, male=2)	-.051	.057	-.892	.373
Courses in psychopharmacology	.189	.059	3.205	.001
Self-identified psychopharmacology knowledge	-.016	.062	-.265	.791
Value placed on psychopharmacology knowledge	.039	.053	.735	.462
Desire to take a psychopharmacology course	.411	.053	7.821	.000
Number of correct answers on psychopharmacology test	-.042	.052	-.818	.413